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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/783,884 | 02/14/2001 | Christopher J. Berry | 57897-5005 | 3367 |

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| EXAMINER | |
|---|---|
| JIANG, SHAOJIA A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1617 | |

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/783,884 | BERRY ET AL. | |
| | Examiner | Art Unit | |
| | Shaojia A Jiang | 1617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 January 2004 and 14 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-23,34-46,48 and 52-61* is/are pending in the application.

4a) Of the above claim(s) *1-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *34-46, 48, and 52-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

This Office Action is a response to Applicant's amendment and response filed January 7, 2004 and November 14, 2003 wherein claims 34-46 and 48 have been amended. Currently, claims 1-23, 34-46, 48, and 52-61 are pending in this application.

It is noted that claims 1-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, submitted August 26, 2002.

Claims 34-46, 48, and 52-61 as amended now are examined on the merits herein.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 34-46, 48, and 52-61 as amended now are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al. (5,514,398, of record) and Jandacek (3,865,939, of record) and Lane et al. (5,591,772, of record) for the same reasons of record in the previous Office Action August 13, 2003.

Imai et al. discloses that a rice bran composition, γ-OZ, comprising sterols such as campesterol stigmasterol, sitosterol and their esters in about 19% wt, and cycloarterol in about 35% wt, and triterpene alcohol is useful as food additives in a food composition, food product such as an edible oil, and a method of reducing total serum

cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human. See abstract, col.1 line 10-17, 33 to col.2 line 22, col. 22-26, and claim 3.

Jandacek discloses that the edible oil composition therein comprising a plant sterol (a free sterol and a steryl ester) in 2.0-6.0% wt, which is known to inhibit or suppress cholesterol in the blood (see col.2 lines 28-68), is useful in a composition and a method of reducing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human (see abstract, col.1-2, and Table 1 at col.3-4). Jandacek also discloses that this edible oil composition with effective amounts of active ingredients is administered in the form of a food product such as cooking, salad oil or foodstuffs. See claims 1-6.

Lane et al. discloses that tocortrienols and tocortrienol-like compounds including a tocortrienol and a tocorpherol from plant source such as rice bran, are useful as food additives in a food composition (foodstuff) and a method of decreasing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human and tocortrienols and tocortrienol-like compounds also have antioxidant activity. See abstract and claims 5-11 and 21-25. Lane et al. also discloses that the reduced levels of the total serum cholesterol and LDL and the raised levels of the HDL by tocortrienol compositions therein are within the instant claims (see Table 1-3 at col. 25-30).

The prior art does not expressly disclose the employment of a particular edible oil comprising the particular ratio of (i) a tocopherol, a tocopherol, or combinations, (ii) free sterols, steryl esters or combinations (iii) a cycloartenol; or a particular edible oil comprising the particular percentages of (1) about 10 to 30% of tocopherols,

tocopherols or combinations, (2) about 2 to 20% of free sterols; (3) about 2 to 20% of sterol esters, (4) about 0.1 to 1.0% of cycloartenols, a method of reducing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ a particular edible oil comprising the particular ratio of (i) a tocopherol, a tocopherol, or combinations, (ii) free sterols, steryl esters or combinations (iii) a cycloartenol; or a particular edible oil comprising the particular percentages of (1) about 10 to 30% of tocopherols, tocopherols or combinations, (2) about 2 to 20% of free sterols; (3) about 2 to 20% of sterol esters, (4) about 0.1 to 1.0% of cycloartenols, a method of reducing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human.

One having ordinary skill in the art at the time the invention was made would have been motivated to employ a particular edible oil comprising the particular ratio of (i) a tocopherol, a tocopherol, or combinations, (ii) free sterols, steryl esters or combinations (iii) a cycloartenol; or a particular edible oil comprising the particular percentages of (1) about 10 to 30% of tocopherols, tocopherols or combinations, (2) about 2 to 20% of free sterols; (3) about 2 to 20% of sterol esters, (4) about 0.1 to 1.0% of cycloartenols, a method of reducing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human, since each component in the edible oil or a food composition and it's effective amount or the range of effective amounts, e.g., tocopherols, tocopherols, free sterols, sterol esters, and cycloartenols, are known in the art, e.g., the rice bran composition, γ-OZ, according to Imai et al.

Moreover, the usefulness of these oil compositions or food compositions (foodstuff) is also known, i.e., useful in a method of decreasing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human, according the cited prior art.

Therefore, one of ordinary skill in the art would have reasonably expected that combining these known ingredients in their known amounts to be useful for the same purpose, i.e., decreasing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human, in a composition to be administered would improve the therapeutic effects for treating hypercholesterol in human.

Additionally, one of ordinary skill in the art would have been motivated to optimize the effective amounts of active ingredients in the composition because the optimization of known effective amounts of known active agents to be administered according the disclosures of Jandacek and Imai et al. and Lane et al. is considered well in the competence level of an ordinary skilled artisan in pharmaceutical science, involving merely routine skill in the art. It has been held that it is within the skill in the art to select optimal parameters, such as amounts of ingredients, in a composition in order to achieve a beneficial effect. See *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Since all active composition components herein are known to useful to treat and prevent hypercholesterol in human, it is considered prima facie obvious to combine them into a single composition to form a third composition useful for the very same purpose. At least additive therapeutic effects would have been reasonably expected. See *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980).

Thus the claimed invention as a whole is clearly prima facie obvious over the combined teachings of the prior art.

***Response to Argument***

Applicant's arguments filed November 14, 2003 and January 7, 2004 with respect to the rejection of claims 34-46, 48, and 52-61 made under 35 U.S.C. 103(a) as being unpatentable Jandacek (3,865,939,) and Imai et al. (5,514,398) and Lane et al. (5,591,772) of record stated in the Office Action August 13, 2003 have been fully considered but are not deemed persuasive as to the nonobviousness of the claimed invention over the prior art as further discussed below.

Applicant asserts that "the Lane reference specifically teaches that sterol compounds should not be combined with tocotrienols to obtain optimum cholesterol reduction" and "In support of that teaching, it provides a method of removing sterol compounds from rice bran". Applicant also argues that "According to Lane, unlike sterol-free tocotrienol compositions, "diets supplemented with sterols were not effective in lowering total serum or LDL-cholesterol levels." However, it is noted that Lane merely teaches the technique for separating or purifying from sterol and others present in the plant or rice bran (see col.12 lines 43 to col.13). Nowhere does Lane teache that "sterol compounds should not be combined with tocotrienols to obtain optimum cholesterol reduction" as Applicant asserts. Note that Lane teaches that "The diets supplemented with sterols were not effective in lowering total serum or LDL-cholesterol levels" and "The maximum decrease in total cholesterol recorded with the sterol supplemented diet was 10.6% and that for LDL-cholesterol was only 6.5%" (emphases added, see col.30

lines 63-67). Hence, the diets supplemented with containing sterols are able to decrease total cholesterol and LDL-cholesterol, but not as effective as tocortrienols and tocortrienol-like compounds according to Lane. Moreover, Lane teaches that the diet which included stabilized rice bran (known containing sterols and tocortrienols) demonstrated superior cholesterol reducing activity when compared with the other diets (see col.26 lines 57-60).

Again, Applicant argument that "Imai teaches that sterols and tocotrienols should not be combined to obtain anticholesterolemic benefits and because Imai and Lane teach away from the claimed combination" is not found convincing. Nowhere do both Lane and Imai teach that sterol compounds should not be combined with tocotrienols to obtain optimum cholesterol reduction.

Applicant's argument regarding the instant ratio of the active ingredients has been fully considered but not persuasive. As indicated in the previous Office Action, Applicant's results in Example 2-4 of the specification at pages 19-23 have been fully considered with respect to the nonobviousness and/or unexpected results of the claimed invention but are not deemed persuasive for the following reasons. The results herein are not seen to provide clear and convincing evidence of nonobviousness or unexpected results over the cited prior art since the results from the testing on the employment of the oil herein do not show any additive effects on decreasing total serum cholesterol and serum LDL cholesterol and raising serum HDL cholesterol in a human, especially not showing the criticality and significance of the instant claimed ratio of the active ingredients. In such a situation, the applicant must show that the particular range

is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art. In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990). See MPEP § 716.02 - § 716.02(g) for a discussion of criticality and unexpected results.

It is noted that arguments of counsel cannot take the place of factually supported objective evidence. See, e.g., In re Huang, 100 F.3d 135,139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996); In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

Therefore, the evidence presented in specification herein is not seen to support the nonobviousness of the instant claimed invention over the prior art.

For the above stated reasons, said claims are properly rejected under 35 U.S.C. 103(a). Therefore, said rejection is adhered to.

In view of the rejections to the pending claims set forth above, no claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jiang, whose telephone number is (571)272-0627. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan, Ph.D., can be reached on (571)272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9307.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-1235.

S. Anna Jiang, Ph.D.
Patent Examiner, AU 1617
March 24, 2004